

We Claim:

1. A medical device comprising a site-specific delivery device for at least one peroxisome proliferator-activated receptor gamma (PPAR γ) agonist.
2. The medical device according to claim 1 wherein said PPAR γ agonist is a thiazolidinedione.
3. The medical device according to claim 2 wherein said thiazolidinedione is selected from the group consisting of 5-(4-[2-(N-methyl-N-(2-pyridyl)amino)ethoxy]benzyl)-2,4-thiazolidinedione (rosiglitazone), (+)-5-[[4-[(3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl-2H-1-benzopyran-2-yl) methoxy]phenyl]methyl]-2,4-thiazolidinedione (troglitazone), 5-[p-[1-methylcyclohexyl) methoxy]benzyl]-2,4-thiazolidinedione (ciglitazone), 5-[p-[2-(5-ethyl-2-pyridyl) ethoxy]benzyl]-2,4-thiazolidinedione (pioglitazone), 5-[p-[3-(5-methyl-2-phenyl-4-oxazolyl) propionyl]benzyl]-2,4-thiazolidinedione (darglitazone), 5-[[2R)-2-benzyl-6-chromanyl]methyl]-2,4-thiazolidinedione (englitazone), derivatives thereof and combinations thereof.
4. The medical device according to claim 1 wherein said PPAR γ agonist is ciglitazone.
5. The medical device according to any of claims 1, 2, 3 or 4 wherein said medical device is selected from the group consisting of stents, catheters, micro-particles, probes and vascular grafts.
6. The medical device according to claim 5 wherein said stent is a vascular stent or biliary stent.
7. The medical device according to claim 6 wherein said vascular stent is provided with a coating comprising at least one thiazolidinedione.
8. The medical device according to claim 7 wherein said thiazolidinedione is selected from the group consisting of rosiglitazone, pioglitazone, troglitazone, darglitazone, englitazone, ciglitazone, derivatives thereof and combinations thereof.
9. The medical device according to claim 8 wherein said coating further contains a biocompatible polymer selected from the group consisting of polyvinyl pyrrolidone, polytetrafluoroethylene, poly-L-lactic acid, polycaprolactone, polyethylene glycol, polystyrene, acrylates, polyesters and mixtures thereof.

10. A vascular stent having a coating comprising ciglitazone.

11. A medical device comprising a stent having a coating comprising at least one thiazolidinedione selected from the group consisting of rosiglitazone, pioglitazone, troglitazone, darglitazone, englitazone, ciglitazone, derivatives thereof and combinations thereof ; and

a polymer selected from the group consisting of polyvinyl pyrrolidone, polytetrafluoroethylene, poly-L-lactic acid, polycaprolactone, polyethylene glycol, polystyrene, acrylates, polyesters and mixtures thereof.

12. The medical device according to claim 11 wherein said coating comprises: between approximately 50 μg to 250 μg of ciglitazone and polycaprolactone, wherein said ciglitazone and said polycaprolactone are in a ratio relative to each other of approximately 1 part ciglitazone to approximately between 1 to 9 parts polycaprolactone.

13. A method of treating or inhibiting restenosis comprising: providing a vascular stent having a coating comprising at least one PPAR γ agonist; and

implanting said vascular stent into a blood vessel lumen wherein said PPAR γ agonist is released into tissue adjacent said blood vessel lumen.

14. The method according to claim 13 wherein said PPAR γ agonist is a thiazolidinedione.

15. The method according to claim 14 wherein said thiazolidinedione is selected from the group consisting of rosiglitazone, pioglitazone, troglitazone, darglitazone, englitazone, ciglitazone, derivatives thereof and combinations thereof.

16. The method according to claim 13 wherein said coating comprises ciglitazone.

17. The method according to claim 13 wherein said coating comprises: between approximately 50 μg to 250 μg of ciglitazone and polycaprolactone, wherein said ciglitazone and said polycaprolactone are in a ratio relative to each other of approximately 1 part ciglitazone to approximately between 1 to 9 parts polycaprolactone.

18. A method for producing a medical device comprising:

providing medical device to be coated;
compounding at least one thiazolidinedione selected from the group consisting of rosiglitazone, pioglitazone, troglitazone, darglitazone, englitazone, ciglitazone, derivatives thereof and combinations thereof with a carrier compound; and
coating said medical devices with said thiazolidinedione compounded with said carrier compound.

19. The method according to claim 18 wherein said medical device is a vascular stent.

20. The method according to claim 18 further wherein said carrier compound is a biocompatible polymer selected from the group consisting of polyvinyl pyrrolidone, polytetrafluoroethylene, poly-L-lactic acid, caprolactone, polyethylene glycol, polystyrene, acrylates, polyesters and mixtures thereof.

21. A medical device comprising a stent having a coating comprising at least one thiazolidinedione selected from the group consisting of rosiglitazone, pioglitazone, troglitazone, darglitazone, englitazone, ciglitazone, derivatives thereof and combinations thereof; and

at least one additional therapeutic agent selected from the group consisting of antiplatelet agents, antimigratory agent, antifibrotic agents, antiproliferatives, antiinflammatories and combinations thereof providing that said additional therapeutic agent is not a PPAR γ agonist.

22. The medical device according to claim 21 wherein said at least one additional therapeutic agent is selected from the group consisting of antisense oligonucleotides, rapamycin, analogues of rapamycin, exochelin, n-acetyl cysteine inhibitors, chaperone inhibitors and combinations thereof.

23. The medical device according to claim 22 wherein said antisense oligonucleotide is an anti-c-myc oligonucleotide.

24. The medical device according to claim 22 wherein said chaperone inhibitor is geldanamycin.

25. The medical device according to claim 22 wherein said rapamycin derivative is 40-0-(2-hydroxyethyl)-rapamycin.

26. A method of treating or inhibiting restenosis comprising:

providing a vascular stent having a coating comprising at least one PPAR γ agonist and at least one additional therapeutic agent selected from the group consisting of antiplatelet agents, antimigratory agent, antifibrotic agents, antiproliferatives, antiinflammatories and combinations thereof providing that said additional; therapeutic agent is not a PPAR γ agonist; and

implanting said vascular stent into a blood vessel lumen wherein said least one PPAR γ agonist and at least one additional therapeutic agent are released into tissue adjacent to said blood vessel lumen.